

CHAPTER 3

SUPERVISION AND TRAINING

As you advance to ET1 or ETC, you will function as a first-line supervisor. In other words, you will be in immediate control of workers. You will also act as the liaison between your superiors and the workers. You will be responsible for planning the work, issuing jobs, instructing personnel, checking the work, and reporting to your superiors on the progress of assigned tasks.

You will have many more responsibilities added to those you had at your previous paygrade. You have acquired much valuable job-related knowledge. Now it is your turn to pass that knowledge onto others. In this chapter, we will discuss the management (supervision and training) of an electronics shop and some of the problems that are found in technical ratings. In no way can we cover all areas of supervision and training, but we can provide you with a solid foundation of knowledge on which to build. If you desire other good sources of information on this subject, obtain copies of the military requirements training manuals and Navy Leader Development Program courses.

As an electronics supervisor, you will be responsible for maintaining electronics systems equipment. Maintaining this equipment is a job of vital importance. It requires a leadership ability that can be developed only by personnel who have a high degree of technical competence and a deep sense of personal responsibility. These responsibilities range from satisfying the needs of the “users,” to notifying upper management of equipment status and problems. A user, in this instance, is anyone who requires the services of the equipment maintained by your shop, such as Operations Specialists, Radioman, or Air Controllers.

An electronics supervisor spends less time working on equipment and more time ensuring that the shop is running smoothly. Instead of working on a specific equipment, you will spend time on such jobs as updating a personnel qualification standard (PQS) progress chart or scheduling next week’s maintenance. As a senior petty officer, you will find more people asking your opinion on technical matters. Your responsibilities for technical leadership are special to your rating and are directly related to the nature of your work.

The electronic systems field is growing rapidly, caused in part by the swift pace of development in

modern technology. This requires that you keep up with the latest developments. As technology advances, you will find yourself involved with equipment and systems much more complex than any you have previously encountered. Sometimes you may need to develop a method or procedure to check out the operation of a new piece of equipment because the technical information or technical manual has limited information for isolating a malfunction. You must then be able to direct your subordinates in using these specially developed methods or procedures as an interim maintenance procedure. You must acquire the technical and leadership skills required to translate these ideas into actions.

SUPERVISION

As a shop supervisor, you must be aware of the greater scope of your duties and responsibilities. You must also learn and practice the characteristics of a good supervisor. You should continue this learning process as you attempt to master all phases of supervision and management. The following pages discuss many of the elements of shop management that you will encounter as an electronics supervisor.

MANAGEMENT

As an ET1 or ETC, you will normally be a work center supervisor or shop supervisor. In either position, you will be confronted with the many responsibilities of management. As a shop supervisor or work center supervisor, your primary job will be to ensure that the shop or work center functions smoothly. You and your maintenance personnel will have to meet both technical and military requirements. The skills required to manage a maintenance shop are not acquired overnight. You will need to spend time and effort to develop the management ability necessary to accomplish all of your shop’s goals.

The problems and responsibilities that an electronics shop supervisor must face are similar to those encountered in other functional areas of any command. For example, increasing productivity while reducing cost is a goal of all shop supervisors.

While the growth of electronic and computer technology has helped to ease the burden and increase the effectiveness of supervisors and managers in nearly every aspect of command operations, it has sometimes turned the electronics maintenance supervisor's job into an overwhelming problem. You may be responsible for maintaining a multimillion dollar resource ashore or at sea. Your shop will have to keep high-cost, highly sophisticated electronic systems and equipment in the highest possible state of readiness under a variety of working conditions. No matter how well designed an electronic system or equipment is, its value to the command lies in the ability of the maintenance supervisor to provide a maximum amount of "up time."

Consider a few of the problems that the maintenance supervisor faces nearly every workday:

- **User complaints**– Are user complaints about poor maintenance service justified? If so, what are the most economical and effective methods of correcting the causes? If not, what human factors may have led to user dissatisfaction, and are the technicians providing sufficient technical assistance to eliminate the problem-causing human factors (such as poor operator procedures)?
- **Procedural changes**– What improvements could be realized by minor modifications to existing procedures?
- **Future requirements**– Will future system demands affect present resources?
- **System down time**– Is the amount of down time the system suffers reasonable, given the personnel and material assets available?
- **Training requirements**– Have all technicians acquired the highest level of technical competence? If not, can the on-site training program bring them up to speed?
- **New personnel**– Is the in-house training program adequate for new personnel?
- **Material assets**– Will the material assets be adequate for any upcoming deployment ?

If you, as supervisor, have reasonable and well-documented answers to these questions, it is likely that you are effectively managing the shop, instead of merely supervising it. Good management and good supervision are inseparable for the control, operation, and financial budgeting of an electronics maintenance group. The right answers to questions such as those listed above will

significantly enhance a command's ability to carry out its mission. Your prime objective is to maintain control of complex, costly electronic systems and equipment through a sound maintenance management program. You must be aware of the alternatives that are available to make a maintenance management program perform most effectively and efficiently.

SUPERVISORY DUTIES AND RESPONSIBILITIES

An exact list of duties and responsibilities can be made only when the list concerns a specific position; however, here are some typical duties and responsibilities you will have as a maintenance shop supervisor:

- Keeping maintenance operations running smoothly and efficiently
- Promoting teamwork
- Maintaining discipline
- Keeping morale high
- Getting the right person on the job at the right time
- Maintaining the quality and the quantity of work
- Checking and inspecting jobs and personnel
- Preventing accidents and controlling hazards and hazardous material
- Using and storing materials economically
- Maintaining good housekeeping on the job
- Keeping records and preparing reports
- Planning and scheduling work
- Training personnel
- Procuring the supplies and equipment to perform the work
- Inspecting, caring for, and preserving equipment
- Giving orders and directions
- Maintaining liaison with other units, departments, and divisions

Looking at the typical duties and responsibilities in the preceding list, we can see that the following major areas are common to all supervisory positions:

1. Production

2. Safety, health, and physical welfare of subordinates
3. Development of cooperation
4. Development of morale
5. Training and development of subordinates
6. Records and reports
7. Balanced supervision

These seven areas of responsibility are discussed in the following paragraphs:

1. Production. The supervisor is responsible for seeing that all work is done properly and on time. This is true both in the office and in the shop. To meet these goals, the supervisor must function in three main ways:

- a. The supervisor must organize and plan the workload to ensure maximum production with a minimum of effort and confusion.
- b. The supervisor should, as often as possible, delegate the authority for completing work assignments, keeping in mind that the final product is the responsibility of the supervisor.
- c. The supervisor must control the workload and see that all work is completed correctly.

2. Safety, health, and physical welfare. Safety and production go hand in hand. The safe way is the efficient way. When shop personnel are absent because of injury, they are nonproducers. A good supervisor stresses safety to the crew; sets an example by working safely; teaches safety as an integral part of each job; and, most of all, plans each job with safety in mind. A good supervisor does not wait until after an accident happens to start a safety program.

Showing concern over the health and physical welfare of your crew will pay off in increased production. It will add to their feelings of trust and confidence in you as a shop supervisor and will increase the amount of respect they have for you.

3. Development of cooperation. Developing cooperation among the members of your shop is paramount to effective production. Some supervisors, however, tend to overlook the need for cooperation in two other directions:

- a. Cooperation with management
- b. Cooperation with supervisors on other ships, or in other departments, divisions, or work groups of your ship

In the course of a routine equipment overhaul, you will often have to deal with numerous people in shops or units of the repair activity. It is particularly essential, therefore, that you develop a rapport with the management and supervisory personnel of the repair activity.

4. Development of morale. The esprit de corps of a group and their willingness to work toward common goals depend to a great extent upon your leadership. A group with high morale is a producing group.

5. Training and development of subordinates. A good shop supervisor is invariably a good teacher and leader and is a developer of men and women. One of the greatest contributions you can make as a supervisor is the development of your people. You should make sure that at least one trained person is ready to assume responsibility as shop supervisor should the need arise. It is a sign of good leadership when you can take leave and have the shop or division continue to run smoothly. Do not be afraid to teach every phase of your own work to at least one or two subordinates. Since much of your time will involve teaching, you should try to improve your teaching ability.

6. Records and reports. In chapter 2, we discussed a few of the records and reports with which you will be associated. Keeping records and preparing reports are not tasks that you will always enjoy doing, yet they are a vital part of your work. Make it a point to keep neat, accurate records and get reports out on time. Paperwork may seem to be a waste of time, but in the long run, you will realize how much your success as shop supervisor depends upon your ability to handle paperwork properly.

7. Balanced supervision. Think about the major duties and responsibilities we just covered. You must pay the proper amount of attention to each phase of your job. Do not emphasize production at the expense of safety or training. Also, do not become so concerned with the human element that production is neglected. Keep up with paper work as it occurs. In this way you can maintain control of your work day by day and will never need to neglect your more active duties so you can attack a stack of papers. Always attempt to place the proper emphasis on each of your responsibilities, and you will be practicing balanced supervision.

RESPONSIBILITY TO USERS

Your responsibility to users is twofold. First, you must ensure that all equipment is ready for maximum use at all times. Second, you and your shop personnel

should be a source of technical knowledge and training for all users.

Having the most up-to-date electronic equipment and systems is of no value to the user unless the equipment is operating at peak efficiency at all times. Many trouble calls received by electronics repair personnel turn out to be operator errors. An unusually high incidence of operator errors may indicate inadequate training. The problems associated with inadequate training usually occur because of one or more of the following circumstances:

- A large number of new personnel
- A new system being operated
- Installation of new equipment
- Operations following an extended in-port period

The effects of the first three circumstances can be eliminated with an adequate shipboard training program to supplement formal off-ship team training. Since you have the technical expertise, you should assist (or provide) the users with the technical training necessary to operate the electronic equipment and systems correctly. By doing so, you will simplify both your job and the job of your shop personnel. Problems that result from an extended in-port period are usually caused by forgetfulness. Since this is part of human nature, you cannot correct it; however, if the problem continues, you should inform the users' supervisors so that they are aware of the problem.

RESPONSIBILITIES TO UPPER MANAGEMENT

As a maintenance shop supervisor, you will find yourself in a middle management position. You have more responsibilities and direct input to the upper echelon than you did as a petty officer second class. One of your responsibilities is to support the goals and requirements of upper management (the EMO and the department head). This support may take many forms, such as providing unscheduled corrective maintenance, technical reports, additional manpower for important command functions, operation training in specialized areas, or any one of a dozen other tasks that may be required of your shop personnel. On occasion, you may be called upon to solve a difficult problem. If, after much "brain-storming," you are unable to solve the problem, you should seek assistance from the next senior person in the command chain. Keeping a problem to yourself when you have run out of ideas will not solve it. Let the

division LCPO or EMO in on your problem. One of these individuals should be able to assist you.

TRAITS OF A GOOD SUPERVISOR

Good supervisors usually have certain desirable traits. These traits are described in the following paragraphs.

LOYALTY

One trait that should stand out in every supervisor is loyalty. You must show loyalty to your country, the Navy, your unit, your superiors, and the personnel who work for you. To get and keep the respect and loyalty of your personnel, you must be loyal yourself.

POSITIVE THINKING

Good leaders will always be positive thinkers. They think in terms of how things can be done, not why they cannot be done. They maintain an open mind to changes, new ideas, and training opportunities. Positive thinkers look to the future with confidence, and this confidence is contagious. They are enthusiastic about their jobs and the part they play in the Navy. If you want to lead others, start practicing the art of positive thinking today!

GENUINE INTEREST IN PEOPLE

Did you ever meet a really great leader? If so, you probably found that instead of being cold and aloof, this individual was a warm, friendly human being who seemed to make you feel important by paying close attention to what you had to say.

One of the first steps you, as a new supervisor, should take is to get to know your technicians personally. This not only creates a feeling that you are genuinely interested in them, but also it helps you place the right person in the right job at the right time.

You will appreciate the importance of knowing your technicians personally when the need arises for them to convert from electronics technicians to professional defensive tacticians and fighters. Here, the wrong person in the wrong place could prove disastrous.

However, you must avoid falling into the "familiarity" trap. Many experienced supervisors will tell you of cases where they were friendly with certain individuals. When the time came for discipline or some other adverse action, it was very difficult to deal with these people.

INITIATIVE

People with initiative are always needed in the naval service. Initiative is evidence of an open and alert mind. Individuals with initiative continually look for better ways to do things; they don't wait for another person to take action. To be a good supervisor, you must show initiative. Don't put off until tomorrow what you should do today. If you see an unsafe condition, take action to correct it before an accident occurs. If you see that a new form or procedure would simplify a job, devise the new form or procedure. If you see an inadequacy in yourself, try to overcome the inadequacy. Weak people lack initiative. Leaders are characterized by strong initiative.

DECISIVENESS

Leaders are able to make decisions. A common complaint heard from subordinates is, "You can't get a decision from them."

Most of the decisions that must be made by supervisors in the naval service concern relatively minor actions. As often as not, the subordinates merely want the supervisor's approval to perform some action that they already know should be done. A prompt go ahead from the supervisor is all that is needed. In many trivial matters, it makes little difference whether an answer is yes or no. The important thing is to give an answer. The supervisor who stalls, puts off, evades, or refuses to give a decision is a "bottleneck."

Of course, there are times when a decision requires careful consideration of many factors and, therefore, much deliberation. In such cases, you should tell the person when to return for the decision and see to it that you have the decision.

TACT AND COURTESY

Good leaders are habitually tactful and courteous. Whether in the shop or in the office, supervisors can be thoughtful of others without being considered weak.

Tact can be defined as saying and doing the right thing at the right time. It is the lubricating oil in human relationships. It is the regard for the feelings of others based on an understanding of human nature—the little considerations that make the job pleasant and smooth.

Courtesy can be defined as treating others with respect. It means treating people as important human beings, not tools to be used for your convenience. It means following the accepted rules of conduct and being polite. Courtesy is important to the supervisor. One

discourteous act, even though unintentional, can make an enemy—and the supervisor cannot afford to have enemies. If you have one enemy, you have one too many. Remember, courtesy is contagious.

FAIRNESS

The personnel in a shop or crew are extremely sensitive to partiality by the supervisor. (They will even single out little incidents where there was absolutely no intent to show favoritism.) To avoid causing problems, you must think ahead on changes to be made, decisions to be handed down, work to be assigned, recommendations for promotion, and the like. In each instance you must try to make sure that your actions are both fair and impartial.

SINCERITY AND INTEGRITY

You should deal with your personnel squarely and honestly at all times. This will win and hold their respect. Talk to your crew on a one-to-one basis. Don't be afraid to face the facts and say what you think. You often hear, "Give me the person who looks you straight in the eye and tells the truth every time!" A reputation for being a "square shooter" is worth every effort on your part.

Consistency of thought and action are important if your personnel are going to know where they stand. Being too strict one day and too lax the next is worse than being consistently strict or consistently lax. Try not to exhibit good and bad moods to your crew. Your crew tends to reflect your attitudes. Exhibit a firm and positive attitude and be consistent.

Dependability, one of the marks of integrity, involves meeting obligations promptly. A reputation for being "on time, every time" is worth every effort on your part. Build this reputation early, even before you become a supervisor, and maintain it. Any violation of dependability or integrity will cast serious doubts upon your ability to act as a responsible supervisor. One violation of integrity may take months (or forever) to rectify.

TEACHING ABILITY

A great part of your job will involve instructing personnel in one way or another. Even the giving of orders is a form of instruction. You should learn and practice the art of public speaking, the principles of on-the-job instruction, and the techniques of conference leadership. Supervisors who cannot stand on their feet and express their ideas to an individual or a group of

individuals should not be supervisors. To be a successful supervisor, you must be able to train and develop others.

CONFIDENCE

Good supervisors have a quiet confidence (not an arrogant or cocky manner) based on thorough knowledge of the job and belief in their own ability. Confidence begets confidence. It is amazing to see how people will follow individuals who are charged with confidence in themselves and an idea. Mousy, hesitant supervisors who lack confidence in themselves cannot inspire confidence in others. On the other hand, beware of arrogance. Some supervisors put on a front of aggressive confidence to hide a feeling of inferiority. They ridicule the opinions of others; they dominate conversations; they are arrogant. Such individuals are much less effective than they think they are.

Supervisors who have a quiet inner confidence, which is expressed in their confident manner, their actions, and their words, are respected and followed.

MAINTAINING DISCIPLINE

One of the major problems you may encounter as a new supervisor is that of maintaining discipline in your crew. The following discussion provides some pointers to help you achieve success in maintaining discipline.

GIVING ORDERS

A good supervisor gives much thought to the art of giving orders. Notice we said “art,” for giving orders really is an art that you must practice. Proficiency in giving orders will reap you many benefits; and since most disciplinary problems are the result of individuals not carrying out orders, this subject cannot be overemphasized. There are three basic types of orders:

1. The command
2. The request
3. The suggestion

You should always consider (1) the situation under which you will give the order and (2) the individual who is to carry out the order. In the following paragraphs, we discuss the three types of orders, based on each of these two considerations.

The Situation

In a military formation, the direct command, or formal type of order, is always used. The direct

command is also used when there is immediate danger, fire, an accident or other emergency, disobedience of safety rules, and so forth.

The simple request is the best type of order to give for daily routine work. The request is used for most orders given by good supervisors.

The suggestion is excellent when you wish individuals to proceed on their own when you do not know exactly how the job should be done. It is also excellent for building initiative. This method of giving orders builds morale and shows your personnel that you have confidence in them. However, it is not clear cut, and you certainly would have no recourse if the job were not done properly.

The Individual

The direct command is normally used to direct careless, lazy, insubordinate, or thick-skinned individuals. Except in the unusual situations mentioned above, the direct command is normally reserved for those to whom we must speak firmly and positively.

The request is by far the best type of order to use with the normal individual. With most people, a simple request in the form of a question has the full effect of a direct order. Moreover, the request fosters a feeling of cooperative effort and teamwork.

The suggestion is excellent for those to whom a suggestion or hint is sufficient. People with real initiative like to work on their own. In dealing with a sensitive, highly intelligent individual, a mere hint that something is desired is enough to get a project started. Toss this person an idea by saying something like, “Petty Officer Jones, I wonder if it would be a good idea to do this?” or “Seaman Smith, do you have any ideas on how this can be done?” This makes the individual a key person in the project and provides a feeling of importance. It also shows that you have Confidence in this individual and provides excellent training. The suggestion type of order stimulates people to show what can be done.

Although the situation and the individual are the prime considerations in giving orders, the attitude and tone of voice in which they are given are very important. Whenever you give orders, apply the five Cs— Clearly, Completely, Concisely, Confidently, and Correctly. Also, avoid orders that are unnecessary and unneeded.

REPRIMANDING

When one of your subordinates disobeys or fails to carry out an order, you must take action. You would be remiss in your duties as a supervisor if you did not do something about it. The most common type of discipline is the simple reprimand.

The reprimand, too, must be fitted to the individual and the situation. A sensitive individual might be crushed by the slightest hint of something wrong, while a thick-skinned person could easily deal with a severe rebuke.

The reprimand should be a calm, constructive action, not a destructive one. You are interested in the underlying causes, not in how to get even with the person.

Failure to act when a reprimand is due is a sign of poor supervision. No one likes a supervisor who is too lenient and ingratiating. If one individual gets by with something, the supervisor may lose control. On the other hand, issuing too many reprimands is just as bad.

A good supervisor knows how to draw a fine line between harshness and leniency. A person with a keen understanding of human nature is able to discern this line.

Be sure to practice the three Fs of discipline: Fairness, Firmness, and Friendliness. The recommended procedure for administering reprimands follows:

- Get all the facts.
- Do not reprimand a person in front of others.
- Put the person at ease. Find a word of praise first, if appropriate, to take out the sting.
- Use no sarcasm, anger, or abuse.
- Fit the reprimand to the individual.
- Have all the facts at hand; the person may attempt to deny the charge.
- Present the facts.
- Ask the person why there was an error.
- Try to get the person to admit the mistake.
- Do not threaten; this person knows how far you can go.
- Once the wrong is admitted, the reprimand is over.

- Leave on a friendly note, and let the person know the incident is closed. Do not nag.
- Later, follow up with a casual and friendly contact at the shop.

To test the effectiveness of your reprimand, ask yourself, Did it build morale? Remember, you must get along with this person in the future; you must keep this person as a working, producing individual; and you must be able to get along with your own conscience. You do not have to be soft, but remember that there is a great deal of difference between dignity and arrogance.

POSITIVE AND NEGATIVE DISCIPLINE. So far, discipline has been discussed in terms of punishment. Actually, discipline is much more than reprisal for wrongdoing. Discipline exists also where no disciplinary actions ever have to be taken. Most people realize they cannot get along without self-discipline and that no organization can function and no progress can be made unless individuals conform to what is best for the whole group. The supervisor who can build the spirit of cooperation, which is the basis for true discipline, has no discipline problems.

Positive discipline, the trend in discipline being studied widely by intelligent executives and supervisors, is the force that originates within individuals that prompts them to obey the rules and regulations. People in a Navy organization do what is right because they do not want to hurt the group as a whole and because they believe that by following the accepted rules, they will help the group achieve its objectives. This is called "esprit de corps." The supervisor who builds esprit de corps has little need to resort to negative discipline.

Negative discipline is a discipline of fear based on threat of punishment. This type of discipline originates from without. If you subject people to this type of discipline, they will do only enough to get by when you are watching. When you leave for a few minutes, discipline leaves too. Their only motivation for working is fear of reprisal.

Discipline and high morale go hand in hand. Positive discipline is closely tied to the admiration and respect personnel have for their supervisor. This, in turn, is based on good human relations.

THE HUMAN RELATIONS ASPECT OF DISCIPLINE. Good human relations between supervisors and their work force are easy to spot. The upbeat, enthusiastic atmosphere in the shop indicates that supervisors appreciate and understand the workers;

that they have workers' interests and welfare at heart; and that they respect workers' opinions, knowledge, and skills.

In the list below, we have provided some of the human relations factors that lead to positive discipline. Good supervisors

1. understand the principles, standards, rules, and regulations necessary to good conduct; they believe in these things and practice them themselves;

2. know their personnel as individuals, and treat them fairly and impartially;

3. develop the feeling of "belonging" and security in the group;

4. get information to the group through proper channels, and promptly eliminate rumors;

5. use authority sparingly and always without displaying it;

6. delegate authority as far down the line as possible;

7. never make issues of minor infractions or personal issues of disciplinary matters;

8. display confidence in the group, rather than suspicion of it (workers are reluctant to betray expressed confidence);

9. train the group technically;

10. look after the mental and physical welfare of the group;

11. try to avoid errors, but show willingness to admit errors when they make them;

12. develop loyalty in the group and of the group; and

13. know that because of individual differences, discipline cannot be a completely routine matter. Some of the principal causes of misconduct are discontent, idleness, lack of interest in the job, misunderstanding of regulations, resentment, and emotional strain. The wise supervisor avoids the necessity for formal discipline by removing as many of these causes as possible.

RELATIONSHIPS WITH YOUR SUPERIORS

Your bosses are very important people to you. In their hands rests much of your success in your job. Whether or not you like them personally, you have to cooperate with them if you hope to advance.

Many supervisors rate loyalty at the top of the list of desirable qualities. A loyal supervisor does not criticize the boss to others even if there is cause for occasional disagreement.

Dependability is another desirable quality your superior looks for in you. Your boss likes to know that when you are given an assignment you will complete it to the best of your ability and on time. There are few things more annoying to a boss than a subordinate who always has an alibi—who cannot be depended upon.

Do not be a "yes" person; but, on the other hand, do not go to the extreme of being a "no" person. Good bosses want subordinate supervisors who are not afraid to tell them tactfully what they think, even if it means telling them that they are wrong. But they do not like having a subordinate who is against everything and who stubbornly resists every idea!

MAKE SUGGESTIONS TACTFULLY

Most bosses resent employees who make it a common practice to tell them bluntly what should be done or what should not be done. It is easy to get your ideas across to the boss without incurring resentment; just put them in the form of a question: "What do you think about this idea?" or "Do you think this would work?"

If the boss gives you an assignment that is obviously a mistake, tactfully ask about handling it from another angle. However, if the boss insists on carrying out the order as specified, do not argue.

KEEPING THE BOSS INFORMED

Bosses like to know what is going on, but they do not want to be bothered with all the petty details. Keep them advised of personnel problems, proposed changes, and other important matters.

If you make a serious mistake, tell your boss about it immediately. Don't wait until your boss discovers the mistake and then try to defend your actions. And remember—lengthy explanations of your actions are not required.

WORKING RELATIONS WITH YOUR FELLOW SUPERVISORS

Friction and jealousy are your prime enemies in establishing cooperation with your fellow supervisors. A good supervisor avoids "backstabbing," gossiping, and criticizing fellow supervisors when the competition

5-2 becomes keen. The main thing to remember is that you cannot rise by putting others down. If you try to do so, your unkind actions will ultimately cause you to fail in your job.

In addition to being cooperative personally, a good supervisor may sometimes have to encourage cooperation on the part of other supervisors. In the long run, the person who is able to foster and maintain harmony in all relationships is the one who will be assigned to the Navy's key jobs.

ACHIEVING TEAMWORK WITHIN YOUR OWN SHOP

Even in primitive times, people banded together. To have a working band or team, you should know and appreciate the psychological rewards that a group must provide in order to hold its members:

- A feeling of security.
- A feeling of belonging.
- A feeling of being somebody within the group.
- A feeling of pride in the group.
- A feeling of recognition from outside the group. (The harder it is to get into the group, the more important the members feel.)
- A feeling of accomplishment. (The group is attaining common goals.)
- A satisfaction of certain needs (advancement, pride in work, acquiring new skills, and so on) while attaining the goals of the group.

A good leader encourages these feelings, since the stronger these psychological rewards, the stronger will be the group. Some supervisors achieve such a strong feeling of group pride that their personnel actually feel privileged to work in the group. The people we supervise are human beings with individual differences. They usually produce only to the extent that they feel like producing, and their will to produce is based primarily on the ability of their supervisors to win their cooperation. Good leadership is reflected in this ability to get cooperation; and cooperation, in turn, is a reflection of the respect the personnel have for their supervisors. Teamwork or cooperation, then, is based on good human relations.

When you walk into any shop or office, you can almost feel whether or not the spirit of cooperation is present. If it is there, you can see it in the faces of the

people, in the appearance of the work space, in the reception you receive, and in the way the work is performed.

Poor cooperation and poor management are indicated whenever bickering, jealousy, and friction are present. Low production is the inevitable result. Frequent accidents, indifference, sloppy work, griping, complaints and grievances, criticism of the unit, buck-passing, loafing, many requests for transfer, poor planning, and poor training or indifference to training—all these danger signals indicate lack of cooperation and poor management.

ELEMENTS TO CONSIDER IN DEVELOPING COOPERATION

Developing cooperation within your group is largely a matter of adapting your behavior to meet the varying situations you encounter daily—and in going out of your way to show a willingness to cooperate. You cannot simply order cooperation.

Resistance to Change

People resist change. Even when the change is clearly for the better, people persist in clinging to the old way. Remember, unless ordered by higher authority, changes must not be too fast. They should be properly timed and, if possible, explained before they are placed in effect.

Correcting Mistakes

When you think you need to correct a mistake a worker is making, unless safety is involved, make the correction through those who deal directly with the individual. Remember the worker takes orders from an immediate supervisor, and that supervisor may have valid reasons for having the individual perform in a certain way.

Delegation of Authority

Good supervisors soon learn to delegate work. They develop their subordinates and get them to do all the routine work. These supervisors then have time required to handle personnel problems, study, and do the necessary planning and creative work. Those who do not learn the knack of delegation may develop ulcers and may also have an uncooperative group!

Training

Train at least one person to handle your position, and do not be afraid that whomever you train will surpass you. Supervisors who train and develop subordinates make possible their own advancement, because higher level managers want good people in every slot.

Good supervisors provide for each person in their unit. They encourage their people to take advantage of educational opportunities. When the individuals in the group feel that a supervisor is interested in their welfare and that the job offers more than just pay, they develop a strong sense of cooperation and loyalty.

Setting the Example

An important part of your job is to set an example. Supervisors who are enthusiastic about their jobs, who are friendly and good humored, and who foster harmony among their associates, do much to create a cooperative attitude in their group by their own example.

Giving Credit

Do not fail to give credit where credit is due, and do not forget to pass on any credit given to you. Good supervisors give full credit to the team. Frequent and sincere praise is a wonderful incentive to individuals and to the group as a whole.

Tactful Handling of Personal Problems

Personal problems arise almost daily in any group of people. You must tactfully handle each problem. Rumors about any of your personnel, disputes between personnel, family troubles, and similar situations can disrupt the efficiency of the group. Usually, positive action from you is required.

Try to solve problems that arise in your shop or between crew members, if solving those problems is within your capability. This does not mean that you should act as a chaplain, marriage counselor, or psychiatrist. It emphasizes the need for you to be able to recognize the symptoms of problems that require special help, so that you may arrange to have those problems placed in proper hands as soon as possible.

In each case, first listen and get all the facts; then tactfully bring about a solution so that all concerned can go back to the job and work in harmony. The best course of action is usually to face problems squarely and honestly, bringing them out into the open on a

one-to-one basis, and solving them before they become major situations.

BREAKING IN NEW PERSONNEL

Suppose you are in the middle of a rush job. You are behind in your paper work. You have been called to the phone unceasingly. You are considering going on "special liberty" because nothing has gone right. Then, right in the middle of it all, a new crew member, now assigned to your shop or crew, arrives.

The most important thing at the moment is to get this person off to the right start. Remember, the impressions this individual receives during the first days on the new assignment will carryover for a long time to come. The future attitude of this person concerning the outfit is being molded, good or bad, during this period. Below are some suggestions for properly handling new members of your crew.

- Put people at ease. Give them a cordial greeting. Make them feel that you are glad to have them. Be tactful. Get their names straight and remember them.

- Show personal interest. Seek out topics of mutual interest. Ask about their previous work, their families, and if they have been properly berthed.

- Give them the right point of view. Let them know you have confidence in them and that you expect and demand good work. Now is the time to build proper attitudes and loyalty.

- Tell them about the work. They are eager to know what they will be doing. Show them how their jobs will fit in with the whole picture and help them feel that their jobs are important.

- Give them essential information. Do not confuse them with endless details. Write down for them some of the essential information, since at this time they have so much other information to remember.

- Introduce the new people to each member of the crew they will work with and to any others whom they need to know.

- See them again at the end of the day. Ask them how they are doing and give them a few words of encouragement.

- If you cannot personally carry out the foregoing suggestions, put new personnel in the hands of a trusted subordinate who is well qualified to handle the situation. Explain the reason for your unavailability and tell the

new arrivals that you will want to talk to them later in the day—and be sure to do it.

PERSONNEL PROBLEMS

Since misunderstandings can arise in almost any working situation, a complaint in good faith, a disagreement between the members of the crew, or direct or indirect disobedience are problems that you must face and attempt to settle or solve as expeditiously as possible.

SCIENTIFIC APPROACH TO PROBLEM SOLVING

Whenever you have a problem to solve, you should use a logical, proven method to guide you to a solution. Problem solving is primarily a method of thinking based on scientific procedures. In the following paragraphs, we will show you how to use a scientific approach to solve a problem. Place yourself in the hypothetical situation of being leader of a group of problem solvers as you read about the basic steps in problem solving.

One of the most important steps in learning to use the scientific approach is accepting the need for a logical, orderly procedure for evaluating a problem. The procedure we will teach you is known as the six-column approach. Over the years, the six-column approach has been found to give excellent results. The column titles represent the phases and sequence of the problem solving process: (1) Facts, (2) Problem, (3) Possible solutions, (4) Consequences of possible solutions, (5) Accepted solutions, and (6) Cause or causes of the problem.

A shallow look at the system may lead you to think that the process is fine, as long as time is not an important element. You may think you won't often have enough time to use it. A deeper look, however, will show you that this process, properly learned and properly used, applies to any problem regardless of the time element. You must then realize that time is relative. Extra time spent "up front" saves time later on. By using the scientific approach, you will prevent "wheel spinning" and make better use of whatever time you have available to solve the problem. Some problems require lengthy consideration. Others may require only a few seconds to determine the facts, identify the problem, consider a course of action, and then act. In either case, the process works. After you have used the process several times, you will start

to use it automatically whenever you encounter a problem.

1. Determining the facts (column 1). In the problem-solving method, you must determine the facts. All good objective reasoning is based on facts, things, or events that have actually occurred. People often interject assumptions, which are subjective and have not occurred. In learning the problem-solving method, insist that your group deal only with the facts as outlined in each problem; or, if an assumption is accepted, make sure it is identified as an assumption, not a fact. After the group has discussed the problem and agreed upon the facts, list the facts under column #1.

Delay discussion of any facet of the problem until you are sure you have obtained all pertinent facts.

2. Defining the problem (column 2). In any human relations incident or any other problem, there are usually two elements or problems—the apparent and the underlying. You will notice this when your group tries to define the problem. Most people can easily see the immediate problem: the equipment does not work someone is in trouble, relationships are poor between people—these things are apparent.

The individual must face all these problems. A person can usually define the immediate (or apparent) problem but must be trained to define the underlying difficulty. A statement defining the problem should be written out; an oral statement is not enough. The group should analyze the written definition critically and come to an agreement concerning it. Only then is the group equipped to explore the best possible course of action.

3. Possible courses of action (column 3). Any problem has many possible courses of action to achieve solution. Before you decide on any single course of action, try to determine all the courses of action. In handling technical or human relations problems, you should be aware that many alternative solutions exist. Remember, in this phase you are not evaluating the courses of action; you are merely listing the alternatives. Enter the possible courses of action under column #3. The fourth step determines, to a large degree, which one (or combination) of the courses of action from column 3 you can use in solving the problem.

4. Consequences of possible actions (column 4). No leader worthy of the name leaps to the solution of a problem without considering the consequences of all proposed courses of action. What will occur if I do this instead of that? You, as a military leader, are responsible for the action you take. Therefore, you must be

completely aware of the consequences of each decision you make.

In this step you consider the relative importance of each of the course of action. Whichever action you accept in the next step (step #5) will involve the use of manpower and/or materials; therefore, you must consider this step carefully to obtain the most economical result. This phase of the problem requires much discussion and thought.

5. Accepted courses of action (column 5). In this step, one (or a combination) of the possible actions will be chosen as the solution of the problem. Do not think that you need unanimous agreement to achieve a solution. Usually, you will give serious consideration to the opinion of the majority; however, the final decision is your responsibility as leader, based on your personal evaluation of the facts and recommendations submitted.

6. Cause of the problem (column 6). Now assume that you have solved the immediate problem; it no longer exists. What is left for you to do? You should ask, "What caused this problem to occur?" By asking this question, you have begun to think in terms of preventing the problem from happening again, if possible. You should give considerable time and discussion to this phase. To be a good leader, you must develop insight to determine the basic causes of problems. Good thinking in this area can help the organization to function smoothly. The goal is to prevent problems from occurring, rather than solving them after they occur. Remember, if you don't make a concerted effort to prevent problems, you will have to make a concerted effort to solve them.

COMMUNICATING

You must develop good communication habits if you are to succeed as a supervisor. Communication can be broken down into two broad categories: internal and external.

INTERNAL COMMUNICATION

To achieve good internal communication, keep your personnel informed. Your personnel should know the reasons behind changes that affect them. If security prevents you from giving reasons, let them know security is the reason. They will understand. Communication is a two-way street. You, as the supervisor, need feedback from your crew on everything that is happening so you can make decisions and formulate plans. Be open and free in communicating

with your people and encourage them to discuss their feelings and opinions.

Good internal communication also means each person is taking to every other person. Work centers and work groups should communicate freely with each other. This is important in developing harmonious relations within your work center. Investigate any breakdown in communication and try to correct the problem immediately.

EXTERNAL COMMUNICATION

Without proper external communication, you will not be able to coordinate complex jobs involving a number of work centers and divisions. You must develop good lines and methods of communication external to the shop. Running systems tests may involve several work centers aboard ship and, in some cases, other ships or activities. Unless you can effectively communicate your requirements to each work center, you will be unable to successfully complete the systems tests.

Much of your external communication is in the form of correspondence. The correspondence will be of little value unless you have an effective way of keeping track of the information and ensuring that it gets to the ultimate users. You should develop controls to ensure that information gets to and from the people who will benefit the most from it. If you do this, you, the shop supervisor, will be the winner. Methods of control were discussed in chapter 2.

ASSET USAGE

Effective shop supervisors make the best use of their assets. (These assets can be either personnel or material.) To do this you must thoroughly understand the limitations and capabilities of your personnel and know if there are any major deficiencies in your material assets.

PERSONNEL ASSETS

Personnel assets are the most complex to manage, as well as the most flexible to use. Electronics personnel are responsible for maintaining a variety of electronic and digital equipment and systems. Because the various pieces of equipment and systems maintained by electronics personnel are very complex, long periods of training are required to qualify personnel for the maintenance role. Personnel graduating from formal schools are assigned Navy enlisted classification codes (NECs). There are many different NECs assigned to the

ET rating; your shop will normally have several of these NEC requirements. At the present time, almost all ETs are assigned, by the Bureau of Naval Personnel (BUPERS), according to the requirements of the NECs.

Shop personnel are the key to your success as a shop supervisor. Without their continuing loyalty to you and their willingness to follow in the direction that you lead, you will be unable to effectively achieve the required results. You may be a good technician; but remember, you cannot do everything yourself.

MATERIAL ASSETS

Basically, your material assets are every material thing, such as parts, tools, test equipment, and work space, that you need to perform the shop's maintenance role. A deficiency in any one area makes it difficult for you to perform your job in the most efficient manner. By carefully surveying your shop and identifying its shortcomings, you can take corrective action and improve the conditions under which your shop personnel will be working.

ADEQUACY OF SPACES

Sometimes it seems as if electronics spaces are designed by people who will never have to use them for maintenance. Ashore, the facilities are normally adequate to provide proper maintenance. However, aboard ship there is little space that is not dedicated to some other vital function.

As a shop supervisor you may feel there is little you can do about the inadequacies of your shop spaces. Sometimes this may be true; but, in most cases, if you analyze carefully and do some brainstorming, you can devise better methods of arranging the workspace. This, in turn, should result in more efficient working conditions. Consider each shop on a case-by-case basis. Brackets, stowage bins, book shelves, and collapsible workbenches can be installed in an amazing number of places that previously may have been overlooked. Get all of your people in on the planning. They will be more likely to excel when they play a vital part in fixing up the shop.

If you are fortunate enough to be in on the planning stages of a maintenance shop, there are a number of things that you should consider:

- Is adequate lighting available?

- Are adequate 60-Hz and 400-Hz (if applicable) power receptacles available?
- Is the layout of the shop the most effective use of the space?
- Are special safety devices or safety precautions needed in the shop area?
- If parts storage is included, is it centrally located to all work stations as practically as possible?

These are just a few of the questions that you will be asking. The only limits to how well a shop can meet your needs are the space available and your ingenuity and imagination. If space is available, you should be able to develop the plans for an efficient work area.

MATERIAL AVAILABILITY

Material availability determines how long it takes to complete a maintenance action. A spare part for a particular piece of equipment could require from 6 months to over a year to acquire from a vendor who has to produce it on a special order. There is little the shop supervisor can do about this situation. There are many other situations, however, in which the shop supervisor can play a controlling role. Consider a few of the materials that are under the control of the supervisor:

- Tools
- Test equipment
- Consumables
- Safety equipment
- Other materials specific to your shop

Respect your personnel by having the correct material available so they can perform their preventive and corrective maintenance without delays caused by lack of material.

CONTROL OF MATERIAL ASSETS

The most effective way to control material assets is to maintain some form of accountability. Mass issuing of tools to all shop personnel represents a major expense, and it usually means the tools will not be available when needed. Loaning test equipment items to every work center that wants to borrow them may mean the equipment will not be

in the correct spaces when you need it. As shop supervisor, you should always be willing to help others, but you must have a system to keep track of material assets.

You can make a simple equipment checkout log containing information, such as item description, serial number, work center, name of the person to whom the item is checked out, date loaned out, date returned, and a space for the lender's initials. Logging this information will allow you to track tools borrowed and returned and to identify the borrower. (This accountability system works only if everyone uses it!)

Whenever you issue tools to ship personnel in the form of toolboxes or kits, keep an inventory of the tools issued. Tools are government property and, as such, are accountable items. Thousands of dollars are needlessly spent on tools each year because tools "walk off" or are carelessly left lying around to be lost or stolen.

TRAINING

Training for personnel may be either formal off-ship training or shipboard division/shop training. As a supervisor, you spend a good part of your time training your work force or arranging for training. Much of this training is informal, such as showing a new technician how to align or adjust a radar repeater or how to use a technical manual. A good training program contains a balance of the various elements of training. The better trained your work force is, the more readily your shop can perform the required maintenance with which you are tasked.

FORMAL OFF-SHIP/SHOP TRAINING

Formal off-ship training is composed of one or more of the following schools:

- Factory schools—held by various vendors or contractors. This is the costliest form of training available. In addition to travel funds, full or partial per diem usually must be funded by the type commander (TYCOM). Often these schools are the only source of training available for new types of equipment being installed on new vessels or vessels undergoing modernization.

- Navy class A and C schools—designated class A or C to identify the level and type of training offered. Class A schools offer the basic technical knowledge and

skills required to prepare personnel for job entry level performance and further specialized training. Class C schools offer the advanced knowledge, skills, and techniques required to perform a particular job in a billet. To send your personnel to these schools, you must obtain training quotas. The *Catalog of Navy Training Courses (CANTRAC)*, discussed later in this chapter, contains information on how to obtain quotas.

- Other formal schools—available from mobile technical units (MOTUs). The classes offered cover a wide range of equipment in use in the fleet and some of the basic skills required to maintain this equipment. MOTUs announce scheduled classes via messages to all local units. This is done on a monthly or quarterly basis, depending upon the location of the MOTU.

The *Catalog of Navy Training Courses (CANTRAC)*, NAVEDTRA 10500, lists all formal courses of instruction offered to naval personnel. This catalog contains the following information on each of the courses listed:

Location

Length

Class school (A, C, P)

Convening frequency

Purpose

scope

Prerequisites

Quota control

Reporting destination

The *CANTRAC* is an invaluable aid for the senior ET and supervisors as they plan off-ship training. The *CANTRAC* is normally located in the Educational Services Office (ESO).

SHIPBOARD OR SHOP TRAINING

Shipboard or shop training is necessary throughout the naval establishment. Technicians reporting to their first duty station from a C school have much to learn about their particular work center or work group operation and system configuration. The courses of instruction that ETs attend generally provide only the fundamental theory and skills required to perform the minimum maintenance on electronic and digital equipment. Most C schools do not have the manpower or equipment available to have the students perform all

of the maintenance tasks they will ultimately be required to perform. Most of the hands-on training ETs receive comes at their first duty stations. As a shop supervisor, you are responsible for providing the extra training the new ET will require to become a competent, technically skilled technician. You can do this by using a combination of the following training methods:

1. On-the-job training (OJT)—One of the most used and easiest ways of providing training
2. Personnel qualifications standards (PQS)—A method of developing the ability of a person to stand a watch or maintain a piece of equipment
3. Formal shipboard training—The best way to train large groups of people, but requires more effort and preparation than the two preceding methods

On-the-Job Training (OJT)

This is by far the simplest and easiest way to train. It can be used almost anytime the shop supervisor desires. Showing a new ET how to perform an hf transmitter alignment, how to perform rf power measurements, and how to perform a receiver sensitivity check are all examples of OJT. When used wisely, OJT allows new ETs to gain the hands-on experience under operational conditions that could not be acquired at a formal school. You perform OJT many times a day without ever thinking about it. By emphasizing OJT, you will be able to increase the technical competence of your new personnel in a shorter time. Although you can use OJT informally, you should also schedule it as part of your shop's in-rate training program.

Personnel Qualification Standards (PQS)

The PQS system was discussed earlier in chapter 1. We will now show you how you can use the PQS system in training your personnel. You can use PQS as a method of training or qualifying new personnel reporting aboard. You can also use it as a method for cross-training and requalifying experienced personnel. The concept of standards for personnel qualification is not new in the Navy. For many years, various forms of qualification standards have been in use. Observing the performance of new technicians in a shop routine helps the shop supervisor decide when the technicians are ready to stand a watch or work on equipment by themselves. The first lieutenant applies a similar approach to hands-on performance evaluation in the qualification of helmsmen and boat coxswains. The detailed checkoff list approach to watch station qualification in submarines has been used for many years with great

success. By developing a step-by-step watchstander's PQS for a particular installation, you can ensure that any new ET reporting aboard will receive all pertinent information. The Personnel Qualification Standards developed to date have been very beneficial as an element of a well-managed unit training program.

The success of the PQS program in your division or shop depends upon you. To make this program a success, you must take the following steps:

1. Have and maintain an adequate PQS reference library of technical, procedural, and rate training manuals.
2. Effectively manage the overall division or shop training program.
3. Have a program to prepare work group supervisors as PQS qualifiers, Supervise and assist designated PQS qualifiers.
4. Have realistic individual qualification goals and time limits.
5. Monitor individual qualification progress.

Formal Shipboard/Shop Training

The most difficult training to perform is that aboard ship or in a busy maintenance shop. There are many variables to consider when you attempt formal training aboard ship. First, consider the preparation required for presenting a formal class. Four factors you must consider when you prepare for a formal training session are as follows:

1. Are adequate up-to-date lesson plans or instructor's guides available?
2. Can the presentation be scheduled at a time that will give maximum attendance?
3. Is there an adequate location available to use as a classroom?
4. Is there a method available for measuring class achievement?

The following paragraphs discuss each of the four factors listed above.

1. Availability of lesson plans. If lesson plans or instructor guides (IGs) are available, you should carefully screen them to be sure they contain the topics you want to present and all of the points you want to emphasize—the need-to-know material. If lesson plans or instructor guides are not available or are inadequate

TITLE:	WRITE TITLE AND LESSON NO.
OBJECTIVES:	LIST LEARNING OBJECTIVES; (List the learning objectives the instructor desires to meet with the lesson. Make objectives realistic.)
MATERIAL:	1. TRAINING AIDS: (List training aids needed to teach this lesson.) 2. REFERENCES: (List the sources from which this material was obtained.)
INTRODUCTION:	The instructor should introduce the lesson at this point and create interest in the lesson by possibly relating a short story to catch the trainees interest. (Related story should key up the importance of knowing lesson.)
PRESENTATION:	The vital information to be taught should be placed in this portion of the lesson plan in outline form. It should be outlined in such a manner as to provide the instructor with a coordinated flow of information.
APPLICATION:	A list of questions should be prepared in advance to see if the trainees have absorbed the presented material (Answers to the questions should be included for the instructor to refer to.)
SUMMARY	The instructor should then review the vital elements of the presentation.
TEST	A small quiz maybe administered though not required.
ASSIGNMENT:	An assignment maybe given to reinforce the lesson. Not mandatory.

Figure 3-1.-A lesson plan outline.

for your needs, prepare new ones. Figure 3-1 shows an example of a lesson plan format.

Whenever you start to prepare a lesson plan or IG, you should remember one important point: Instructors are the experts; they should be fully knowledgeable in the subject area. If you are hazy on some areas, get out the books and refresh your memory. Instructors who have not adequately prepared themselves lose their credibility when they falter and hesitate while covering a subject.

2. Class scheduling. Schedule formal class presentations as early in the day as possible. (Shortly after morning quarters is an ideal time.) At this time, people are rested, ready to start the day, and in a more receptive mood than if they had already worked a full day and were waiting for liberty call. There are always interruptions to class schedules. By planning well enough in advance and ensuring that all persons attending the formal class are aware of the schedule, you can minimize the effects of outside events. Keep your training sessions short and schedule them over a number

of days. Trying to cover too much material in one day may produce poor results due to

- interruptions because of ship evolutions,
- loss of interest because of the length of the class, or
- the technical nature of material covered.

3. Class location. Find a suitable location to hold the training session. This is often a problem on small ships since spaces are cramped and room is at a premium. At a shore station, training rooms are usually available. An adequate space for a classroom should be

- as comfortable as possible,
- well lighted,
- arranged so the entire class can see the instructor and vice versa,
- free from outside noise,

- capable of seating the personnel attending the class, and
- adequately equipped with the necessary training devices before the start of class.

4. Methods of measuring class achievement. There are several ways to measure class achievement. Written tests and performance tests are the two primary methods. These tests give you, the instructor, an idea of how well you have presented the material. Prepare your written tests before class, using the IG as a source topics to test. Include only questions which are based on the need-to-know information you plan to present during the lecture or demonstration. Prepare your performance tests in much the same way as you do written tests. Require each student to perform the procedure while another student assists. If necessary, you can prepare job sheets to help the students in a particularly complex procedure. Also, two students can take turns performing the same procedure as you observe and grade their performances. Wherever a hazardous condition may exist, always emphasize safety precautions on the job sheet.

Training Presentation

The training presentation is the culmination of your effort and preparation. For the training to be effective, you must present the prepared material in an effective manner. All of the effort you put into preparing for the training session may be negated if you do not give an effective presentation. The following is a list of some of the pitfalls you should avoid when you give a formal presentation:

- Talking in a monotone voice. This will put your class to sleep.
- Jangling coins or keys in your pocket. This diverts the attention of the class from the topic you are discussing because they are distracted by what you are doing. If you have the habit of “jingling,” remove the coins and keys from your pockets before you begin the training session.
- Talking during a loud burst of background noise. Your class will not be able to hear you.
- Using distracting mannerisms, such as tugging your ear or playing with a ruler or pen. Again, the class will pay more attention to what you are doing than to the subject you are discussing.
- Talking down to the class. This will cause animosity toward you, causing you to lose the attention and interest of the class.
- Losing control of the class. An uncontrolled class will be distracted and will not learn.

Keep your presentation interesting, accurate, and to the point. Toss in a comment on personal experience when you want to emphasize a certain point, or ask questions if you see you are losing the interest of the class or of an individual. The object is to keep your class working and receptive to the information you are presenting.

Training Topics

A wide variety of topics are appropriate to an electronics division. Some of the topics (in addition to electronic equipment and systems) for which you should have lesson plans and training are

- safety,
- use of test equipment,
- electronics-casualty-control,
- general military subjects, and
- basic electronics (NEETs modules).

In chapter 1 of this TRAMAN, you were told about four standards that you can use as a basis for your training program. These standards are as follows:

- Naval Standards
- Occupational Standards
- Personnel Qualification Standards
- Equipment Standards

By using the Naval and Occupational Standards listed in the *Advancement Handbook for Petty Officers*, you can tailor your training program to cover the professional and technical requirements of your personnel. Examine these standards and cover them in your lesson plans.

Use equipment standards when you train personnel on new equipment that they may not be familiar with. Stress the importance of equipment standards to personnel before they first begin maintenance on equipment. This will show them that you are concerned about the performance of the equipment and that they should also care about the quality of its performance.

Training Publications

The training chapter of OPNAVINST 3120.32, *Standard Organization and Regulations of the U.S. Navy*, discusses the quarterly forecast, weekly schedules, and various personal and group training records that must be kept.

The *List of Training Manuals and Nonresident Training Courses*, NAVEDTRA 12061 (mentioned earlier) lists training manuals and correspondence courses and contains alphabetical listing of PQS products.

Other sources of information are

1. type commander's (TYCOM) directives and shop directives,
2. NAVPERS 18068, *Manual of Navy Enlisted Manpower and Personnel Classification and Occupational Standards*, and
3. NAVEDTRA 10500, *Catalog of Navy Training Courses (CANTRAC)* (previously described).

Training Films

Training films are valuable sources of supplementary information on many technical subjects.

There are two types of visual information libraries from which audiovisual aids can be checked out. These are the General Visual Information Libraries and the Installation Visual Information Libraries. The General Visual Information Libraries are located at the Naval Education and Training Support Centers at Norfolk, Va., and San Diego, Cal. They are operated under the cognizance of the Chief of Naval Education and Training and provide mail-order loans of audiovisual aids to fleet and shore activities. The Installation Visual Information Libraries are currently comprised of libraries located at naval aviation and medical installations. The *Department of the Navy Catalog of Navy and Marine Corps Visual Information Productions*, OPNAV-P-09B1-01-88, lists all the U.S. Navy training films in stock and the procedures for acquiring them.

TRAINING SCHEDULES AND RECORD

Scheduling of shipboard training requires the careful attention of the training officer, department heads, and division officers to minimize conflict with the activities of the ship and to ensure that the time

allotted to training is used to the best advantage. The only justification for a record of training is that it provides continuity to the training program by indicating what training has been done.

When you develop a training schedule, you must consider the ship's operating schedule and yard overhaul periods (availabilities) assigned by the type commander. A yard overhaul (availability) takes place periodically (approximately every 3 years).

LONG-RANGE TRAINING SCHEDULE

The ship's training cycle (fig. 3-2) is tied closely to the periods of time between overhauls. The long-range training plan, prepared by the training board, is the basic instrument for planning and carrying out the ship's training requirements.

The long-range plan contains only information of major importance needed to ensure that the overall coordination and planning of the training effort are effective. It is not concerned with minor details of the ship's training schedule. In effect, the plan outlines the periods of time that are to be considered as all-hands evolutions, during which little personal training may be scheduled. These events include major inspection, trial, and maintenance periods; competitive exercises; off-ship team training; general quarters, general drills; and so forth. When complete, the plan becomes the framework for the preparation of the more detailed quarterly forecast of all-hands evolutions and the weekly training schedules.

QUARTERLY FORECAST OF ALL-HANDS EVOLUTIONS

Based on the long-range training schedule and general policy guidance from the commanding officer, the training officer prepares a quarterly forecast, or estimate, of the number of normal working hours required to carry out evolutions involving all hands. On the basis of that estimate, the training officer also forecasts the number of hours that are available for individual division activities.

When the ship's employment schedule is reasonably firm, the training officer prepares the quarterly forecast simultaneously with the long-range training schedule. At other times, the training officer can forecast only as far ahead as reliable estimates can be made, perhaps monthly or biweekly.

The analysis is based on a normal work week of 35 hours per person—7 hours per day for 5 days. It is obvious

A TYPICAL TRAINING CYCLE

Shipyard Overhaul Period (Availability)	Months out of Shipyard
Preparation for Refresher Training; Calibration and Alignment of Equipment; RFS; ISE; Commence	
Refresher Training	1 (Jul)
Refresher Training; ORI	2 (Aug)
25-Knot Economy Trial }	3 (Sep)
Commence Competitive Year }	4 (Oct)
	5 (Nov)
	6 (Dec)
	7 (Jan)
	8 (Feb)
Administrative Inspection	9 (Mar)
Full Power Trial	10 (Apr)
	11 (May)
Complete Competitive Year	12 (Jun)
Economy Trial }	13
Commence Competitive Year }	
Operational Readiness Inspection	14
	15
	16
	17
Economy Trial	18
	19
Material Inspection (INSURV)	20
Administrative Inspection	21
	22
Full Power Trial; Prepare for	
Shipyard Overhaul	23
Complete Competitive Year	24
Shipyard Overhaul	

Figure 3-2.-A ship's training cycle is adjusted to the periods of yard overhauls (availabilities).

that shipboard personnel work many more hours a week than 35. Watch standing, repairs to disabled equipment, general quarters, off-duty studies, and so on, take up much of the individual's time beyond the usual work week. The quarterly forecast of all-hands evolutions, however, must be based on the realistic assumption that most training takes place during normal working hours.

In preparing the forecast, the training officer indicates the total number of crew-hours that must be reserved for each all-hands evolution. Thus, during a week in which type training (TYT) is to be conducted, 31 hours may be reserved for one all-hands evolution and 2 hours for another evolution. After the training officer has completed the calculations, he may have reserved 10 crew-hours for training. On the basis of this computation, the training officer may then inform all division officers of the number of hours available for division activities (35 hrs -10 hrs = 25 hrs).

DIVISION QUARTERLY FORECAST OF ACTIVITY

As a leading ET, you will generally be called upon to assist the EMO or division officer with the division quarterly forecast, at least the portion concerning ET personnel. The EMO or division officer may prepare a quarterly forecast to show how the time available for division activities is to be divided among watch standing, lessons and drills, and routine operations. The use of this forecast is optional because small divisions, such as those on a destroyer, receive little benefit from its use. It is most helpful in the control of fairly large groups of personnel participating in diversified activities.

The forecast is simply a weekly breakdown of total hours available during the quarter. First, the hours needed for watch standing are subtracted from the total. The hours remaining are divided according to the existing situation. Some routine maintenance, for instance, may have been included because of operational commitments, implementation of quality monitoring, or inoperative equipment. If so, the training cycle can be adjusted to absorb the extra time. A good rule of thumb, however, is a 50-50 approach to training versus maintenance, unless equipment becomes inoperable or an operational emergency arises.

QUARTERLY TRAINING SCHEDULE

The preparation of a quarterly schedule requires careful planning and imagination to ensure completion of individual and team training. The division officer is

responsible for maintaining this schedule, and it is generally posted in an area where all ET rates have access. The leading petty officers generally meet with the EMO or division officer to plan the quarterly training schedule, depending upon the ship's operating schedule, the quarterly forecast of all-hands evolutions, and the administrative and maintenance needs of the division.

Most of the schedule is devoted to specific subjects that are to be taught during indicated weekly periods. A certain amount of instruction should take place during every watch, but a definite schedule ensures that each of the ship's ET drills and exercises is taught at least once every quarter, operational conditions permitting.

WEEKLY TRAINING SCHEDULE

Toward the end of each week, training petty officers will consult the quarterly training schedule and prepare a training program for the following week. The weekly schedule should include pertinent information on the long-range training schedule and on training items allocated for that week from the quarterly training schedule. Any remaining training time can be used as a pickup of any lessons, drills, exercises, and so on, that may have been missed the previous week because of unforeseen circumstances. After the training petty officer has completed preparation of the weekly training schedule, he will forward it to the division officer via the leading ET for approval and incorporation into the EMO's or division officer's weekly division training schedule.

When space permits, the weekly schedule may include the names of instructors and such details as the locations and times of lectures and films. Additionally, any major maintenance activity, test, or inspection may be included in the weekly training schedule, which may then serve as a plan of the week.

The weekly schedule should make provisions for three categories of training: (1) all-hands, (2) military, and (3) professional. All-hands training is best typified by the onboard "know-your-ship" requirements. These requirements generally apply to all newly reported personnel, regardless of rate or rating. Military training applies to the mandatory naval standards for all hands, according to paygrade. Professional training is for personnel in a specific rating group, by paygrade.

TRAINING RECORDS

The responsible leading petty officers should know at all times how much training has been done and how much remains to be done. Numerous records of

individual training must be maintained to keep this information current.

To standardize record keeping, the Office of the Chief of Naval Operations has developed four forms, one of which should be suitable for any record or schedule needed in the training program. One of the forms is the weekly training schedule. The three remaining forms bear the title General Record; they are distinguished by the designations Type I, Type II, and Type III. The main difference in the three types is a flexible columnar arrangement, which permits any one of the forms to be used for several records.

- Type I is useful in preparing the long-range training schedule, quarterly forecast of all-hands evolutions, and the division quarterly forecast of activity.

- Type II may be used to maintain both enlisted and officer records of training. Its format is such that a broad column on the left of the sheet permits relatively lengthy entries, such as names, functions, or training

requirements. The other columns are headed by individual blanks.

- Type III is reserved for scheduling instructional periods. The reverse side is basically a calendar with a space for each day of the year. Planned instructional periods are usually noted in pencil. Because of space limitations, the entries are coded or abbreviated. When a planned period of training has taken place, the appropriate entry is inked in to indicate that it has been done.

REFERENCES

Data Systems Technician 1 & C, NAVEDTRA 10203, Naval Education and Training Program Development Center, Pensacola, Fla., 1982.

Electronics Installation and Maintenance Books, General, NAVSEA SE000-00-EIM-100, Commander, Naval Sea Systems Command, Washington, D. C., 1983.

